

METHOD AND APPARATUS FOR
ESTABLISHING A SUBSCRIPTION TO A PERIODICAL

5 The present application is a continuation-in-part application of co-pending Patent
Application No. 08/841,791, entitled "METHOD AND APPARATUS FOR SELLING
SUBSCRIPTIONS TO PERIODICALS IN A RETAIL ENVIRONMENT, filed in the name of
Jay S. Walker and Sanjay K. Jindal on May 5, 1997, incorporated by reference as part of the
present disclosure.

10 FIELD OF THE INVENTION

The present invention relates to methods and apparatus for facilitating the sale of
subscriptions to periodicals.

BACKGROUND OF THE INVENTION

15 Each year, over one billion magazine issues are sold through over 50,000 retail
stores in the United States. The "cover price" (cost of an issue) at a typical retail store
("retailer") is often two or three times higher than the pro rata price of an issue provided in
connection with a subscription to the periodical. Despite the higher prices, consumers are
willing to purchase issues from retail stores because of convenience and timeliness.

20 Some consumers decide to forgo the advantages of issues purchased at retail
stores in favor of subscriptions to periodicals, which are more cost effective. However, many
inconveniences deter purchasers of single issues at retail stores from subscribing to the
periodicals. For example, if a customer purchases a subscription, the retailer is deprived of the
revenue he might have gained if the customer were to purchase the issues of the periodical.

Furthermore, the customer cannot pay for a subscription with cash. The consumer must either mail a check or make a telephone call to initiate a subscription and provide a credit card number.

Retailers are burdened by the need to manage issues of periodicals. Retailers receive issues from a fulfillment house. Typically, the retailer is unable to sell approximately half of the issues, and must return them at substantial cost to the retailer. It is very difficult to predict which issues will sell and the quantities thereof. If too many issues are ordered, they must be returned. If too few issues are ordered, the retailer does not realize the profit it could have realized. Consequently, it is difficult or impossible to accurately stock the correct quantities of various issues.

It would be advantageous to provide a method and apparatus for facilitating the sale of subscriptions to periodicals.

SUMMARY OF THE INVENTION

It is an object of the present invention to facilitate the sale of subscriptions to periodicals.

In accordance with the present invention, a POS terminal receives an identifier that indicates a periodical. For example, the POS terminal may include a bar code scanner that reads a bar code printed on a periodical. The POS terminal then determines if the POS terminal can initiate a subscription for the periodical. For example, the POS terminal may determine if there is a subscription price stored for the periodical. If so, then the POS terminal outputs an offer for a subscription to the periodical if there is a subscription price stored for the periodical. If the customer accepts the offer, a subscription to the periodical for the customer is initiated.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic illustration of an apparatus for initiating a subscription at a retail store.

FIG. 2 is a schematic illustration of a POS terminal of the apparatus of FIG. 1.

5 FIG. 3 is a schematic illustration of a server of the apparatus of FIG. 1.

FIG. 4 is a schematic illustration of a fulfillment house computer of the apparatus of FIG. 1.

FIG. 5 is a schematic illustration of an inventory database of the server of FIG. 3.

10 FIG. 6 is a schematic illustration of a record of a subscription database of the server of FIG. 3.

FIG. 7 is a schematic illustration of an authentication code database of the server of FIG. 3.

FIG. 8 is a schematic illustration of a frequent shopper database of the server of FIG. 3.

15 FIG. 9 is a schematic illustration of a record of an offer database of the server of FIG. 3.

FIG. 10 is a schematic illustration of a record of a transaction database of the server of FIG. 3.

20 FIG. 11 is a schematic illustration of a record of a free issue database of the server of FIG. 3.

FIG. 12 is a schematic illustration of a subscription sales database of the server of FIG. 3.

FIG. 13 is a schematic illustration of a subscriber database of the fulfillment house computer of FIG. 4.

FIG. 14 is a front plan view of a receipt.

FIGS. 15A and 15B depict a flow chart representing a method for establishing a
5 subscription to a periodical.

FIG. 15C is a schematic illustration of a display device.

FIGS. 16A and 16B depict a flow chart representing another embodiment of a method for establishing a subscription to a periodical.

FIG. 17 depicts a flow chart representing another embodiment of a method for
10 establishing a subscription to a periodical.

FIG. 18 depicts a flow chart representing steps performed by a POS terminal in establishing free issues for a customer.

FIGS. 19A and 19B depict a flow chart representing another embodiment of a method for establishing a subscription to a periodical.

FIG. 20 depicts a flow chart representing steps performed by a POS terminal in
15 canceling free issues for a customer.

FIG. 21 depicts a flow chart representing steps performed by a fulfillment house computer.

FIGS. 22A and 22B depict a flow chart representing steps performed by a POS
20 terminal in granting a free issue for a customer.

FIG. 23 depicts a flow chart representing steps performed by a POS terminal in providing offers to a customer.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In accordance with the present invention, a customer that wishes to purchase an issue of a periodical at a retail store is offered the choice between an issue of the periodical and a subscription to that periodical. Thus, the customer may conveniently order a subscription. The retailer benefits from such a transaction by collecting a portion of the profits of the subscription sale. The fulfillment house, which may be a publisher of the periodical, benefits from increasing the circulation of the periodical through an additional subscription.

Referring to FIG. 1, an apparatus 10 for initiating a subscription at a retail store includes a server 12 that is in communication with POS terminals 14, 16 and 18. The server 12 directs the operation of, stores data from, and transmits data to the POS terminals 14, 16 and 18. The server 12 may itself be a POS terminal, as described below, or may be another computing device that can communicate with one or more POS terminals. Although three POS terminals are shown in FIG. 1, any number of POS terminals may be in communication with the server 12 without departing from the spirit and scope of the present invention. Each of the POS terminals 14, 16 and 18 may be located in the same store, in different stores of a chain of stores, or in other locations. The server 12 may perform many of the processes described below as performed by a POS terminal, especially those processes that are performed for more than one POS terminal. The server 12 may also store data that is used by more than one POS terminal.

The server 12 is also in communication with a fulfillment house computer 20 which receives information about subscriptions and in turn controls the distribution of issues in accordance with the subscription information.

Referring to FIG. 2, the POS terminal 14 may be, for example, the NCR 7454 manufactured by NCR Corporation or the IBM 4683 manufactured by International Business

Machines. The following description of the POS terminal 14 is likewise descriptive of the POS terminals 16 and 18. The POS terminal 14 includes a processor 202 that comprises one or more conventional microprocessors such as the Intel® Pentium® microprocessor. The processor 202 is in communication with a data storage device 204, such as an appropriate combination of magnetic, optical and/or semiconductor memory. The processor 202 and the storage device 204 may each be (i) located entirely within a single computer or other computing device; (ii) connected to each other by a remote communication medium, such as a serial port cable, telephone line or radio frequency transceiver; or (iii) a combination thereof. For example, the POS terminal 14 may comprise one or more computers that are connected to a remote computer for maintaining databases.

The processor 202 is also in communication with an input device 206, a printer 208 and a display device 210. The input device 206 preferably comprises a keypad for transmitting input signals, such as signals indicative of a purchase, to the processor 202. The input device 206 may comprise a card reader for reading magnetically-encoded information on cards passed therethrough, such as credit cards, frequent shopper cards and identity cards. The input device 206 may comprise an optical scanner for reading bar codes, such as bar codes registered on items of inventory. The input device 206 may comprise a touch screen for generating signals that indicate when and where the screen has been touched, pressed or actuated. The printer 208 is for registering indicia on paper or other material, thereby printing receipts, coupons and vouchers as commanded by the processor 202. The display device 210 is operative to display at least alphanumeric characters to the customer and/or cashier, and thus may be any of a number of known video monitors, liquid crystal displays ("LCD") or light

emitting diode ("LED") displays. Many types of input devices, printers and display devices are known to those skilled in the art, and need not be described in detail herein.

The storage device 204 stores a POS control program 220 for controlling the processor 202. The processor 202 performs instructions of the POS control program 220 and thereby operates in accordance with the present invention and particularly in accordance with the methods described in detail herein. The POS control program 220 furthermore includes program elements that may be necessary, such as an operating system and "device drivers" for allowing the processor 202 to interface with computer peripheral devices, such as the input device 206, the printer 208 and the display device 210. Appropriate device drivers and other necessary program elements are known to those skilled in the art and need not be described in detail herein.

Referring to FIG. 3, the server 12 includes a processor 302 that comprises one or more conventional microprocessors such as the Intel® Pentium® microprocessor. The processor 302 is in communication with a data storage device 304, such as an appropriate combination of magnetic, optical and/or semiconductor memory. The processor 302 and the storage device 304 may each be (i) located entirely within a single computer or other computing device; (ii) connected to each other by a remote communication medium, such as a serial port cable, telephone line or radio frequency transceiver; or (iii) a combination thereof. For example, the server 12 may comprise one or more computers that are connected to a remote computer for maintaining databases.

The storage device 304 stores a server control program 320 for controlling the processor 302. The processor 302 performs instructions of the server control program 320 and thereby operates in accordance with the present invention and particularly in accordance with the methods described in detail herein. The server control program 320 furthermore includes

program elements that may be necessary, such as an operating system and "device drivers" for allowing the processor 302 to interface with computer peripheral devices. Appropriate device drivers and other necessary program elements are known to those skilled in the art and need not be described in detail herein.

5 The storage device 304 also stores (i) an inventory database 322, (ii) a subscription database 324, (iii) a transaction database 326, (iv) a frequent shopper database 328, (v) a subscription sales database 330, (vi) an authentication code database 332, (vii) a free issue database 334, and (viii) an offer database 336. In addition, the POS terminals 14, 16 and 18 may query the server 12 to obtain information from the databases stored by the server. In another
10 embodiment, one or more of the POS terminals 14, 16 and 18 may store one or more of the databases 322, 324, 326, 328, 330, 332, 334 and 336. The databases 322, 324, 326, 328, 330, 332, 334 and 336 are described in detail below and depicted with exemplary entries in the accompanying figures. As will be understood by those skilled in the art, the schematic illustrations and accompanying descriptions of the databases presented herein are exemplary
15 arrangements for stored representations of information. A number of other arrangements may be employed besides the tables shown. Similarly, the illustrated entries represent exemplary information, but those skilled in the art will understand that the number and content of the entries can be different from those illustrated herein.

Referring to FIG. 4, the fulfillment house computer 20 includes a processor 402
20 that comprises one or more conventional microprocessors such as the Intel® Pentium® microprocessor. The processor 402 is in communication with a data storage device 404, such as an appropriate combination of magnetic, optical and/or semiconductor memory. The processor 402 and the storage device 404 may each be (i) located entirely within a single computer or other

computing device; (ii) connected to each other by a remote communication medium, such as a serial port cable, telephone line or radio frequency transceiver; or (iii) a combination thereof. For example, the fulfillment house computer 20 may comprise one or more computers that are connected to a remote computer for maintaining databases.

5 The fulfillment house computer 20 is in communication with a printing press controller 410 that controls the printing of magazine destination addresses. For example, the printing press controller 410 may control the printing of magazine address labels or the printing of indicia directly on magazine covers. The fulfillment house computer 20 directs the printing press controller 410 to print addresses in accordance with stored destination addresses of
10 subscribers, described below.

 The storage device 404 stores a fulfillment house control program 420 for controlling the processor 402. The processor 402 performs instructions of the fulfillment house control program 420 and thereby operates in accordance with the present invention and particularly in accordance with the methods described in detail herein. The fulfillment house
15 control program 420 furthermore includes program elements that may be necessary, such as an operating system and "device drivers" for allowing the processor 402 to interface with computer peripheral devices. Appropriate device drivers and other necessary program elements are known to those skilled in the art and need not be described in detail herein. The storage device 404 also stores a subscriber database 422. The subscriber database 422 is described in detail below and
20 depicted with exemplary entries in the accompanying figures.

 Referring to FIG. 5, a table 500 illustrates an embodiment of the inventory database 322 (FIG. 3). The table 500 includes entries 502, 504, 506, 508 and 510, each of which describes a type of inventory item. It will be understood by those skilled in the art that the table

500 may include any number of entries. The table 500 also defines fields for each of the entries 502, 504, 506, 508 and 510, which specify (i) an item identifier 520 for uniquely identifying the inventory item, (ii) an item description 522, and (iii) an item price 524 which is the price that customers are to be charged for one unit of the item. The item identifiers may identify periodicals as well as other items. For example, supermarkets typically offer periodicals as well as other items such as food items.

Referring to FIG. 6, a table 600 illustrates a record of the subscription database 324 (FIG. 3). The subscription database 324 typically has a plurality of records, each defining subscriptions available for a particular periodical. The table 600 includes a periodical identifier 602 that corresponds to the item identifier 520. Thus, a periodical identified in the inventory database 322 has a corresponding record in the subscription database 324. The table 600 also includes a periodical title 604 and a periodical frequency 606 that indicates how often new issues of the periodical become available.

The table 600 also includes entries 608, 610 and 612, each of which describes a subscription to the periodical. It will be understood by those skilled in the art that the table 600 may include any number of entries. The table 600 also defines fields for each of the entries 608, 610 and 612, which specify (i) a subscription identifier 620 for uniquely identifying the subscription, (ii) a number of issues 622 that are provided with the subscription, and (iii) a subscription price 624 which is the price that customers are to be charged for the subscription.

Referring to FIG. 7, a table 700 illustrates an embodiment of the authentication code database 332 (FIG. 3). The table 700 includes entries 702, 704, 706, 708 and 710, each of which describes an authentication code which is used to indicate that the subscription is authentic and that the subscription was purchased through a retail store. It will be understood by those

skilled in the art that the table 700 may include any number of entries. The table 700 also defines fields for each of the entries 702, 704, 706, 708 and 710, which specify (i) an authentication code 720 for indicating a particular subscription ordered by a customer, and (ii) an availability 722 of the authentication code. Authentication codes can be printed on blow-in cards or can otherwise be used when initiating a subscription. Authentication codes are typically used to identify a customer that calls with a complaint about a subscription.

Referring to FIG. 8, a table 800 illustrates an embodiment of the frequent shopper database 328 (FIG. 3). The table 800 includes entries 802, 804 and 806, each of which describes a frequent shopper (a customer that has registered with the store, typically in exchange for some sort of preferred service). It will be understood by those skilled in the art that the table 800 may include any number of entries. The table 800 also defines fields for each of the entries 802, 804 and 806, which specify (i) a frequent shopper identifier 820 for uniquely identifying a frequent shopper, (ii) a frequent shopper name 822, (iii) a frequent shopper address 824, (iv) a credit card number 826 the frequent shopper may designate for various credits and debits, (v) a frequent shopper status 828 that indicates a rating or other measure of the frequent shopper, (vi) a telephone number 830 of the frequent shopper, (vii) an electronic mail address 832 of the frequent shopper, and (viii) points 834 earned by the frequent shopper.

The frequent shopper status of a frequent shopper may be based on, for example, the amount of money the frequent shopper has spent at the business, the number of visits to the business, and/or whether the frequent shopper has paid for a particular rating. The frequent shopper status may be used to determine, for example, discounts or promotional offers for which the customer is eligible. Similarly, the points of a frequent shopper may be earned based on, for example, the amount of money the frequent shopper has spent at the business during one or more

transactions and/or the number of transactions with the business. The points may be redeemed in exchange for items, as described below.

Referring to FIG. 9, a table 900 illustrates a record of the offer database 336 (FIG. 3). The offer database 336 typically has a plurality of records, each defining offers provided to a particular frequent shopper. The table 900 includes a frequent shopper identifier 902 that corresponds to the frequent shopper identifier 820 (FIG. 8) of the frequent shopper database 328 (FIG. 3). Thus, a frequent shopper identified in the offer database 336 has a corresponding entry in the frequent shopper database 328.

The table 900 includes entries 904, 906, 908 and 910, each of which describes a periodical to which a subscription has been offered to the frequent shopper. It will be understood by those skilled in the art that the table 900 may include any number of entries. The table 900 also defines fields for each of the entries 904, 906, 908 and 910, which specify (i) a periodical identifier 920 that identifies the periodical and that corresponds to the periodical identifier 602 (FIG. 6) of the subscription database 324 (FIG. 3), (ii) a number of transactions 922 in which an issue of the periodical was purchased by the frequent shopper, (iii) a number of times 924 that a subscription to the periodical was offered to the frequent shopper, and (iv) an indication 926 of whether the frequent shopper has a subscription to the periodical (e.g. has accepted an offer for the subscription).

Referring to FIG. 10, a table 1000 illustrates a record of the transaction database 326 (FIG. 3). The transaction database 326 typically has a plurality of records, each defining a transaction. The table 1000 includes a transaction identifier 1002 that uniquely identifies the transaction, a date 1004 when the transaction occurred and a time 1006 when the transaction occurred. The table 1000 also includes an indication of whether a subscription to a periodical

was offered 1008 and the corresponding periodical identifier 1010. The table 1000 also includes a frequent shopper identifier 1011 identifying a frequent shopper (if any) that participated in the transaction. The frequent shopper identifier 1011 corresponds to a frequent shopper identifier 820 (FIG. 8) of the frequent shopper database 328 (FIG. 3). Accordingly, further information regarding the frequent shopper that participated in the transaction may be determined from the frequent shopper database 328.

The table 1000 includes entries 1012, 1014 and 1016, each of which describes an item purchased in the transaction. It will be understood by those skilled in the art that the table 1000 may include any number of entries. The table 1000 also defines fields for each of the entries 1012, 1014 and 1016, which specify (i) an item identifier 1020 that identifies the item and that corresponds to the item identifier 520 (FIG. 5) of the inventory database 322 (FIG. 3), (ii) an item price 1022 that corresponds to the item price 524 (FIG. 5), and (iii) a quantity 1024 of the item purchased.

Referring to FIG. 11, a table 1100 illustrates a record of the free issue database 334 (FIG. 3). The free issue database 334 typically has a plurality of records, each defining periodicals of which a particular frequent shopper is entitled to free issues from the retailer. The table 1100 includes a frequent shopper identifier 1102 that identifies the frequent shopper and that corresponds to a frequent shopper identifier 820 (FIG. 8) of the frequent shopper database 328 (FIG. 3).

The table 1100 includes an entry 1104 that describes a particular periodical of which the frequent shopper is entitled to free issues from the retailer. It will be understood by those skilled in the art that the table 1100 may include any number of entries. The table 1100 also defines fields for each entry, which specify (i) a periodical identifier 1120 that identifies the

periodical and that corresponds to a periodical identifier 602 (FIG. 6) of the subscription database 324 (FIG. 3), (ii) a number of free issues 1122 that the frequent shopper was granted, (iii) a number of the free issues collected 1124 already from the retailer by the frequent shopper, (iv) a number of the free issues remaining 1126 to be collected by the frequent shopper, and (v) a date 1128 when the last issue was collected. The use of free issues is described in detail below.

Referring to FIG. 12, a table 1200 illustrates an embodiment of the subscription sales database 330 (FIG. 3). The table 1200 includes entries 1202 and 1204, each of which describes a subscription sold to a customer. It will be understood by those skilled in the art that the table 1200 may include any number of entries. The table 1200 also defines fields for each entry, which specify (i) an authentication code 1220 that corresponds to the authentication code 720 (FIG. 7) of the authentication code database 332 (FIG. 3), (ii) a frequent shopper identifier 1222 that identifies the frequent shopper that purchased the subscription and that corresponds to the frequent shopper identifier 820 (FIG. 8) of the frequent shopper database 328 (FIG. 3), (iii) a recipient name 1224 and a mailing address 1226 indicating the destination of the issues of the subscription, (iv) a subscription identifier 1228 that identifies the subscription and that corresponds to the subscription identifier 620 of the subscription database 324 (FIG. 3), (v) an amount paid for the subscription 1230, (vi) an indication 1232 of how the subscription was paid for, and (vii) an indication 1234 of when the subscription was paid for. Those skilled in the art will understand that the recipient name and a mailing address may indicate a party other than the frequent shopper, such as when a frequent shopper purchases a subscription for a friend or relative.

Referring to FIG. 13, a table 1300 illustrates an embodiment of a subscriber database 422 (FIG. 4). The table 1300 includes entries 1302 and 1304, each of which describes a

subscription sold to a customer. It will be understood by those skilled in the art that the table 1300 may include any number of entries. An entry of table 1300 is typically created and stored by the fulfillment house computer 20 upon receipt of corresponding information from the subscription sales database 330 (FIG. 3) of the server 12 (FIG. 1).

5 The table 1300 also defines fields for each entry, which specify (i) an authentication code 1320 that corresponds to the authentication code 1220 (FIG. 12) of the subscription sales database 330, (ii) a recipient name 1322 that indicates the destination of the issues of the subscription and that corresponds to the recipient name 1224 (FIG. 12), (iii) a mailing address 1324 that also indicates the destination of the issues of the subscription and that
10 corresponds to the mailing address 1226 (FIG. 12), (iv) a subscription identifier 1326 that identifies the subscription and that corresponds to the subscription identifier 1228 (FIG. 12), (v) the total number of issues 1328 that are provided with the subscription, (vi) a number of issues remaining 1330 to be delivered to the recipient, and (vii) a mailing date 1332 indicating when the first of the issues mailed to the recipient was sent or will be sent.

15 Referring to FIG. 14, a receipt 1400 is registered with indicia indicating a time 1402 and date 1404 of a transaction, a transaction identifier 1406 that uniquely identifies the transaction, the items 1408 included in the transaction and the name 1410 of the frequent shopper participating in the transaction. The exemplary information depicted on the receipt 1400 corresponds to the transaction represented by the table 1000 (FIG. 10) and information
20 determinable therefrom.

Referring to FIGS. 15A and 15B, a method 1500 for establishing a subscription to a periodical is performed by a POS terminal. The POS terminal receives an item identifier that identifies an inventory item (step 1502). The item identifier may be received via the input device

of the POS terminal. For example, the input device of the POS terminal may optically scan a bar code registered on items of inventory. The POS terminal determines whether the item is a periodical. The inventory database 322 (FIG. 3) may be searched to determine if the item identifier is one of the plurality of periodical identifiers, or the subscription database 324 (FIG. 3) may be searched to determine if there are any records that include the item identifier as a periodical identifier. If the item is not a periodical (step 1504), (e.g. the item identifier is not one of the plurality of periodical identifiers), then the item identifier is processed conventionally (step 1506). For example, the item price is added to a subtotal that the customer must pay in exchange for the items.

If the item is a periodical, then the POS terminal determines if the POS terminal can initiate a subscription for the periodical. In one embodiment, the POS terminal determines whether it can initiate a subscription by determining if there is a subscription price stored for the periodical (step 1508). For example, the POS terminal may determine whether the subscription database 324 (FIG. 3) indicates that there is a record corresponding to the item identifier (which is also a periodical identifier if the item is a periodical) and there are one or more corresponding subscription prices for the record. In another embodiment, the POS terminal may determine whether the periodical identifier is stored in a list in which presence in the list indicates that a subscription may be initiated by the POS terminal.

If there is no subscription price stored for the periodical, then the item identifier (which is a periodical identifier) is processed conventionally (step 1506). Otherwise, the POS terminal outputs an offer for a subscription to the periodical. The offer may be for one of an issue of the periodical and a subscription to the periodical (step 1510). In outputting the offer, text may be displayed on a display device of the POS terminal and the text is either read by a

customer or read by a cashier to the customer. The offer typically includes an issue price of the periodical and the subscription price. The issue price of a periodical may be determined by finding in the inventory database 322 (FIG. 3) an item price corresponding to the periodical identifier.

5 The customer responds to the offer by informing the cashier or operating an input device himself. For example, the customer or the cashier may actuate keys on a keypad or press a touch screen. The POS terminal receives the customer response (step 1512). If the response does not indicate that the subscription (step 1514) but instead indicates the issue (i.e. the customer wants the issue only), then the item identifier (which is a periodical identifier) is
10 processed conventionally (step 1506). Otherwise, the POS terminal outputs (e.g. via text displayed on the input device) a request for subscription information (step 1516). Subscription information typically includes a name and address of a recipient of the issues of the subscription. The subscription information is received (step 1518) in any of a number of forms. For example, the customer may fill out a blow-in card with the appropriate subscription information and/or the
15 cashier may enter the appropriate subscription information using the input device of the POS terminal. The POS terminal creates a new record with the subscription information in the subscription sales database 330 (FIG. 3) (step 1520). The new record may further include information such as how the customer pays for the subscription and the date of the transaction, which the POS terminal may readily determine.

20 The POS terminal adds the subscription price to the purchase price (step 1522). If there are more items (step 1524), such as when more item identifiers are to be received, then the POS terminal receives another item identifier (step 1502). If there are no more items, then the POS terminal prints a receipt (step 1526) for the transaction. If the customer accepted the offer

for the subscription during the transaction, then the receipt includes an indication of the subscription and a corresponding authentication code for the subscription.

In an alternate embodiment, the offer may be provided only after all items have been received. For example, after the last item has been scanned the cashier actuates a

5 "TOTAL" key to indicate that there are no more items in the transaction. The POS terminal then outputs an offer for one of an issue of the periodical and a subscription to the periodical.

Referring to FIG. 15C, a display device 1550 displays exemplary text 1555 that illustrates an offer for one of an issue of the periodical and a subscription to the periodical, as described above with reference to step 1510(FIG. 15A). The text 1555 identifies the issue price

10 1560 of an issue of the periodical and a subscription price 1565 for the subscription to the periodical.

Referring to FIGS. 16A and 16B, reference numeral 1600 indicates another embodiment of a method for establishing a subscription to a periodical. In the illustrated method, a subscription information is retrieved from storage and need not be input during the
15 transaction. The POS terminal receives a customer identifier (step 1602) that uniquely identifies the customer participating in the transaction. For example, the customer may pass a frequent shopper card through a card reader of the POS terminal. The card reader in turn reads a customer identifier encoded on the frequent shopper card. The customer identifier may be encoded on a magnetic strip or stored in a semiconductor memory on the card. In another
20 embodiment, the cashier may actuate keys on a keypad to enter a customer identifier.

The POS terminal also receives an item identifier that identifies an inventory item (step 1604), as described above. If the item is not a periodical (step 1606), (e.g. the item identifier is not one of the plurality of periodical identifiers), then the item identifier is processed

conventionally (step 1608). If the item is a periodical, then the POS terminal determines if the POS terminal can initiate a subscription for the periodical. In one embodiment, the POS terminal determines whether it can initiate a subscription by determining if there is a subscription price stored for the periodical (step 1610). If there is no subscription price stored for the periodical,
5 then the item identifier (which is a periodical identifier) is processed conventionally (step 1608). Otherwise, the POS terminal outputs an offer for one of an issue of the periodical and a subscription to the periodical (step 1612).

The customer responds to the offer by informing the cashier who operates an input device accordingly or by operating an input device himself. The POS terminal thus
10 receives the customer response (step 1614). If the response does not indicate the subscription (step 1616) but instead indicates the issue (i.e. the customer wants the issue only), then the item identifier (which is a periodical identifier) is processed conventionally (step 1608). Otherwise, the POS terminal retrieves subscription information that corresponds to the customer identifier (step 1618) from a database. For example, the POS terminal may locate an entry in the frequent
15 shopper database 328 (FIG. 3) that includes the customer identifier and therefrom determine a frequent shopper name and frequent shopper address to which to send issues of the subscription. Alternatively, the subscription information may be stored on the frequent shopper card. The POS terminal creates a new record with the subscription information in the subscription sales database 330 (FIG. 3) (step 1620).

20 The POS terminal adds the subscription price to the purchase price (step 1622). If there are more items (step 1624), such as when more item identifiers are to be received, then the POS terminal receives another item identifier (step 1604). If there are no more items, then the POS terminal prints a receipt (step 1626) for the transaction.

Referring to FIG. 17, reference numeral 1700 indicates another embodiment of a method for establishing a subscription to a periodical. In the illustrated method, a customer is only offered a subscription if the customer does not have a subscription and has not been offered a subscription previously. Thus, an offer for a subscription is not wasted on a customer that is unlikely to accept the offer. Alternatively, a customer may be offered a subscription upon meeting one (e.g. the customer does not have a subscription), rather than both, conditions.

The POS terminal receives a customer identifier (step 1702) that uniquely identifies the customer participating in the transaction. The POS terminal also receives an item identifier that identifies an inventory item (step 1704), as described above. If the item is not a periodical (step 1706), (e.g. the item identifier is not one of the plurality of periodical identifiers), then the item identifier is processed conventionally (step 1708).

If the item is a periodical, then it is determined whether the POS terminal can initiate a subscription to the periodical. In one embodiment, the POS terminal determines whether it can initiate a subscription by determining if there is a subscription price stored for the periodical (step 1710). If there is no subscription price stored for the periodical, then the item identifier (which is a periodical identifier) is processed conventionally (step 1708).

Otherwise, the POS terminal determines whether the customer already has a subscription to the periodical (step 1712). For example, the offer database 336 (FIG. 3) may be searched to locate a record corresponding to the customer identifier. If there is a record corresponding to the customer identifier, then that record is searched to determine if there is an indication that the customer has a subscription to the periodical. If so, then the periodical identifier is processed conventionally (step 1708). If the customer does not already have a subscription to the periodical, then the POS terminal determines whether the customer has been

offered a subscription (step 1714). For example, if there is a record of the offer database 336 that corresponds to the customer identifier, then the record is searched to determine if a subscription to the periodical has been offered to the customer. If the subscription has previously been offered, then the periodical identifier is processed conventionally (step 1708). Otherwise, the customer is offered a subscription to the periodical (step 1716), as described above.

Alternatively, the POS terminal may determine the number of transactions in which the customer purchased the periodical. The number of times a customer has purchased an issue of a periodical suggests whether the customer might like a subscription to the periodical. For example, if the customer has purchased an issue of "NEWSWEEK" more than a predetermined number of times (e.g. during three or more transactions), then that suggests that the customer likes that periodical and might like a subscription to "NEWSWEEK". If there is a record of the offer database 336 that corresponds to the customer identifier, then the record is searched to determine the number of transactions in which the customer purchased the periodical. If the customer purchased more than a predetermined number of the periodical, then the customer is offered a subscription to the periodical.

When a customer accepts an offer for a subscription to a periodical, there may be a delay before the next issue of the periodical is mailed to the customer. In order to ensure that the customer is able to receive consecutive issues of the periodical, the retail store may allow a customer with a subscription to collect free issues from the retailer until the issues start being sent to the customer.

Referring to FIG. 18, reference numeral 1800 indicates steps performed by the POS terminal in one embodiment of the present invention. The POS terminal receives an affirmative response to an offer for a subscription (step 1802) and in response retrieves

subscription information (e.g. a destination mailing address) that corresponds to a customer identifier previously received by the POS terminal (step 1804). A new record is created in the subscription sales database 330 (FIG. 3) with the subscription information (step 1806). In addition, the POS terminal creates an entry for the customer in the free issue database 334 (step 1808). Such an entry includes the periodical and the number of free issues to which the customer is entitled to receive from the retailer. In another embodiment, the entry does not specify the number of free issues. Instead, the customer is entitled to receive free issues from the retailer until the publisher begins mailing issues of his subscription.

Referring to FIGS. 19A and 19B, reference numeral 1900 indicates another embodiment of a method for establishing a subscription to a periodical. In the illustrated method, a customer receives a free issue of the periodical from the retailer in accordance with a corresponding entry in the free issue database 334 (FIG. 3). The retailer may bill the fulfillment house for the cost of the free issue. Alternatively, the retailer may absorb the cost as a retention cost for their frequent shoppers.

The POS terminal receives a customer identifier (step 1902) that uniquely identifies the customer participating in the transaction. The POS terminal also receives an item identifier that identifies an inventory item (step 1904), as described above. If the item is not a periodical (step 1906), then the item identifier is processed conventionally (step 1908).

If the item is a periodical, then the POS terminal determines if the customer is entitled to a free issue of the periodical (step 1910). For example, the free issue database may be searched to locate a record corresponding to the customer identifier. If there is such a record, the record is searched to determine whether there is an entry corresponding to the periodical identifier and if so, whether any free issues are associated with that periodical identifier. If the

customer is not entitled to a free issue of the periodical, then the customer is offered a subscription to the periodical (step 1912), as described above.

If the customer is entitled to a free issue of the periodical, then the POS terminal determines whether the customer has already received the issue to which he is entitled for the current time period (step 1914). For example, if the periodical is a weekly magazine, it can be desirable to assure that the customer does not inadvertently pick up two identical issues during that week. Accordingly, the free issue database 334 (FIG. 3) is searched to determine the date the last issue is collected. If the last issue was collected during the current period for the periodical (e.g. during the current week), then the POS terminal outputs a message indicating that the issue has already been received (step 1916) and the issue price is added to the purchase price.

If the customer has not already received the issue to which he is entitled for the current time period, then the customer receives the issue for free. A discount equal to the issue price is applied to the transaction, making the issue free to the customer (step 1918). Those skilled in the art will understand that a discount is applied only if the issue price is or will be applied as well. Alternatively, neither a discount nor the issue price is applied, thus making the issue free to the customer. The appropriate entry of the free issue database is adjusted to decrease the number of free issues to which the customer is entitled (step 1920). The current date is likewise stored in this entry as the date the last issue was collected by the customer (step 1922). If there are more items (step 1924), then more item identifiers are received (step 1904). Otherwise, a receipt is printed (step 1926), as described above.

If a customer is entitled to free issues from the retailer, he may collect issues from the retailer until the issues start being sent to the customer by the publisher in accordance with

the subscription. Accordingly, the present invention implements a method for notifying the retailer when the customer is no longer entitled to free issues.

Referring to FIG. 20, a method 2000 begins at step 2002 when the server 12 (FIG. 1) receives a cancel signal from the fulfillment house computer 20 (FIG. 1). The cancel signal includes a periodical identifier and a customer identifier, and thereby indicates a customer that is no longer entitled to free issues of a periodical. At step 2004, the server 12 finds a corresponding entry in the free issue database 334 (FIG. 3). For example, the server may locate a record corresponding to the customer identifier (frequent shopper identifier) and in turn locate an entry of the record that has a corresponding periodical identifier. This entry is then deleted (step 2006) or otherwise adjusted to indicate that the customer is no longer entitled to free issues of the periodical. In another embodiment, the entry may be flagged by replacing the authentication code with a de-authentication code.

Referring to FIG. 21, a method 2100 is performed by the fulfillment house computer 20 (FIG. 1) in accordance with the present invention. The fulfillment house computer 20 receives subscription information from the server 12 (step 2102). The subscription information indicates the periodical and the mailing address, and typically includes some or all of the information stored in a record of the subscription sales database 330 (FIG. 3). The server 12 may transmit each record of the subscription sales database 330 to the fulfillment house computer 20 periodically (e.g. once per day) or each time a new record is created in the subscription sales database 330 (e.g. during the step 1520 of FIG. 15).

When the fulfillment house computer 20 receives the subscription information from the server 12, a record based on this information is created in the subscriber database 422 (step 2104). Such a record may also include information not directly received from the server

12. For example, records in the subscriber database 422 may include an indication of when the first of the issues mailed to the recipient was sent or will be sent. The fulfillment house computer 20 typically calculates this date based on information such as planned mailing dates of various periodicals.

5 After initiating a subscription, the customer may be entitled to free issues of the periodical. As the customer collects free issues, the server 12 so notifies the fulfillment house computer 20 via appropriate "free issue update" signals (step 2106). The free issue update signals include the subscription information, allowing the fulfillment house computer 20 to identify the periodical and mailing address. The free issue update signals also include the
10 number of issues provided without charge. Based on the number of issues provided without charge, the fulfillment house computer 20 adjusts the number of issues of the periodical remaining to be mailed to the customer (step 2108). For example, if the customer ordered a twelve-issue subscription to a periodical and the customer collected two issues without charge from the retailer, then the fulfillment house computer 20 will modify the subscription to include
15 ten issues ($12 - 2 = 10$).

 Eventually, the issues of the subscription are mailed to the customer (step 2110). The fulfillment house computer 20 transmits to the server 12 a cancel signal (step 2112) to indicate that the customer is no longer entitled to free issues. The cancel signal includes a customer identifier, periodical identifier and arrival date. Those skilled in the art will understand
20 that the cancel signal may include various forms of information, such as the mailing address instead of the customer identifier. Thus, from the cancel signal the server 12 may identify the subscription and when to prevent the customer from collecting free issues.

A retailer may find it advantageous to provide customers with "points" that are earned, for example, in return for the amount of money the customer has spent at the business during one or more transactions. The points may be redeemed in exchange for issues of periodicals.

5 Referring to FIGS. 22A and 22B, during a method 2200 the POS terminal receives a customer identifier (step 2202) that uniquely identifies the customer participating in the transaction. For example, the customer may pass a frequent shopper card through a card reader of the POS terminal. The card reader in turn reads a customer identifier encoded on the frequent shopper card. The customer identifier may be encoded on a magnetic strip or stored in a semiconductor memory on the card. In another embodiment, the cashier may actuate keys on a keypad to enter a customer identifier.

The POS terminal also receives an item identifier that identifies an inventory item (step 2204), as described above. If the item is not a periodical (step 2206), (e.g. the item identifier is not one of the plurality of periodical identifiers), then the item identifier is processed conventionally (step 2208). If the item is a periodical, then the POS terminal determines if the POS terminal can initiate a subscription for the periodical. In one embodiment, the POS terminal determines whether it can initiate a subscription by determining if there is a subscription price stored for the periodical (step 2210). If there is no subscription price stored for the periodical, then the item identifier (which is a periodical identifier) is processed conventionally (step 2208).

20 Otherwise, the POS terminal determines the amount of points that the customer has (step 2212). For example, the POS terminal may search the frequent shopper database for 328 (FIG. 3) for an entry including the customer identifier (frequent shopper identifier). This entry would in turn indicate an amount of points the customer has. The POS terminal determines

the amount of points necessary to purchase a subscription to the periodical (step 2214). The price of a subscription may be determined from the subscription database 324 (FIG. 3). The POS terminal may locate a record of the subscription database 324 that corresponds to the periodical identifier and then determine from the record a price of one or more subscriptions to the periodical. Based on the subscription price and a predetermined conversion rate from points to subscription price (e.g. one hundred points = \$1.00), the POS terminal may determine the amount of points necessary to purchase a subscription to the periodical. For example, referring to the exemplary data depicted in FIG. 6, a subscription to the periodical "NEWSWEEK" may be purchased for \$15.00, \$28.00 or \$50.00. Given a conversion rate of one hundred points to the dollar, a subscription may be purchased for 1500 points, 2800 points or 5000 points. Alternatively, the subscription database 324 may store for one or more subscriptions to the periodical an amount of points necessary to purchase the subscription.

The POS terminal then determines whether the customer has enough points to purchase a subscription (step 2216). If there is more than one subscription price for the periodical, the POS terminal may determine whether the customer has enough for the least expensive subscription as well as other (more expensive) subscriptions to the periodical. If the customer does not have enough points for a subscription to the periodical, then the POS terminal outputs an offer for one of an issue of the periodical and a subscription to the periodical (step 2218).

If the customer does have enough points for a subscription to the periodical, then the POS terminal outputs an offer for the subscription in exchange for the amount of points necessary to purchase that subscription (step 2220). The customer responds to the offer by informing the cashier or operating an input device himself, and the POS terminal receives the

customer response (step 2222). If the response indicates that the customer accepts the offer (step 2224), then the customer is provided with a free issue of the periodical (step 2226). The amount of points the customer has is decreased (step 2228) in accordance with the amount of points necessary to purchase that subscription. In addition, a discount equal to the issue price is applied to the transaction, making the issue free to the customer (step 2230). If there are no more items (step 2232) then the POS terminal prints a receipt (step 2234) for the transaction. Otherwise, additional item identifiers are received as appropriate (step 2204).

Referring to FIG. 23, a method 2300 illustrates that the POS terminal may provide more than one offer to the customer. The POS terminal outputs an offer for one of an issue of the periodical and a subscription to the periodical (step 2302) as described above. The customer provides a response to the offer, and the response is received by the POS terminal (step 2304). If the response does not indicate a subscription (step 2306), then the transaction continues conventionally (step 2308).

If the response does indicate a subscription, then the POS terminal outputs an offer that prompts the customer to select a number of issues in the subscription and a price to pay therefor (step 2310). For example, the POS terminal may output an offer for one of (i) a normal-length subscription at the subscription price, and (ii) a below normal length subscription for a reduced subscription price. The POS terminal receives a response to the offer (step 2312) and the customer is charged the indicated price (step 2314). The POS terminal then establishes the indicated subscription (step 2316) as described above.

Although the present invention has been described with respect to a preferred embodiment thereof, those skilled in the art will note that various substitutions may be made to those embodiments described herein without departing from the spirit and scope of the present

